

CDIAC

CALIFORNIA
DEBT AND
INVESTMENT
ADVISORY
COMMISSION

THE PUBLIC INVESTMENT PORTFOLIO: PART 1 – INTRODUCTION TO MONEY MARKETS

UNDERSTANDING BANKER'S ACCEPTANCES AND COMMERCIAL PAPER

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July 8, 2015

10:00 AM – 11:00 AM

Disclaimer

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PART 1 – INTRODUCTION TO MONEY MARKETS

Understanding Banker's Acceptances and Commercial Paper

Tony Garcia, CFA
Vice President
Wells Fargo Securities

Henry W. Stern
City Treasurer
City of Anaheim

Wednesday, July 8, 2015

Money Market Securities

“The money market is a market in which large borrowers raise short-term money by selling various debt instruments...”

Marcia Stigum / Frank Fabozzi,
The Dow Jones-Irwin Guide to Bond and Money
Market Investments, page 6

Money Market Securities

- Generally maturities less than one year
- Rated by NRSRO's
- Securities are in "bearer" form
- Marketable securities, purchased as direct issues or secondary market.

Types of Money Market Securities

- U.S. Treasury Bills
 - U.S. Treasury Cash Management Bills – limited issues
- Federal Agency Discount Notes
- Commercial Paper
- Bankers Acceptances
- Negotiable Certificates of Deposits
- Repurchase Agreements
- Money Market Funds / L.A.I.F.

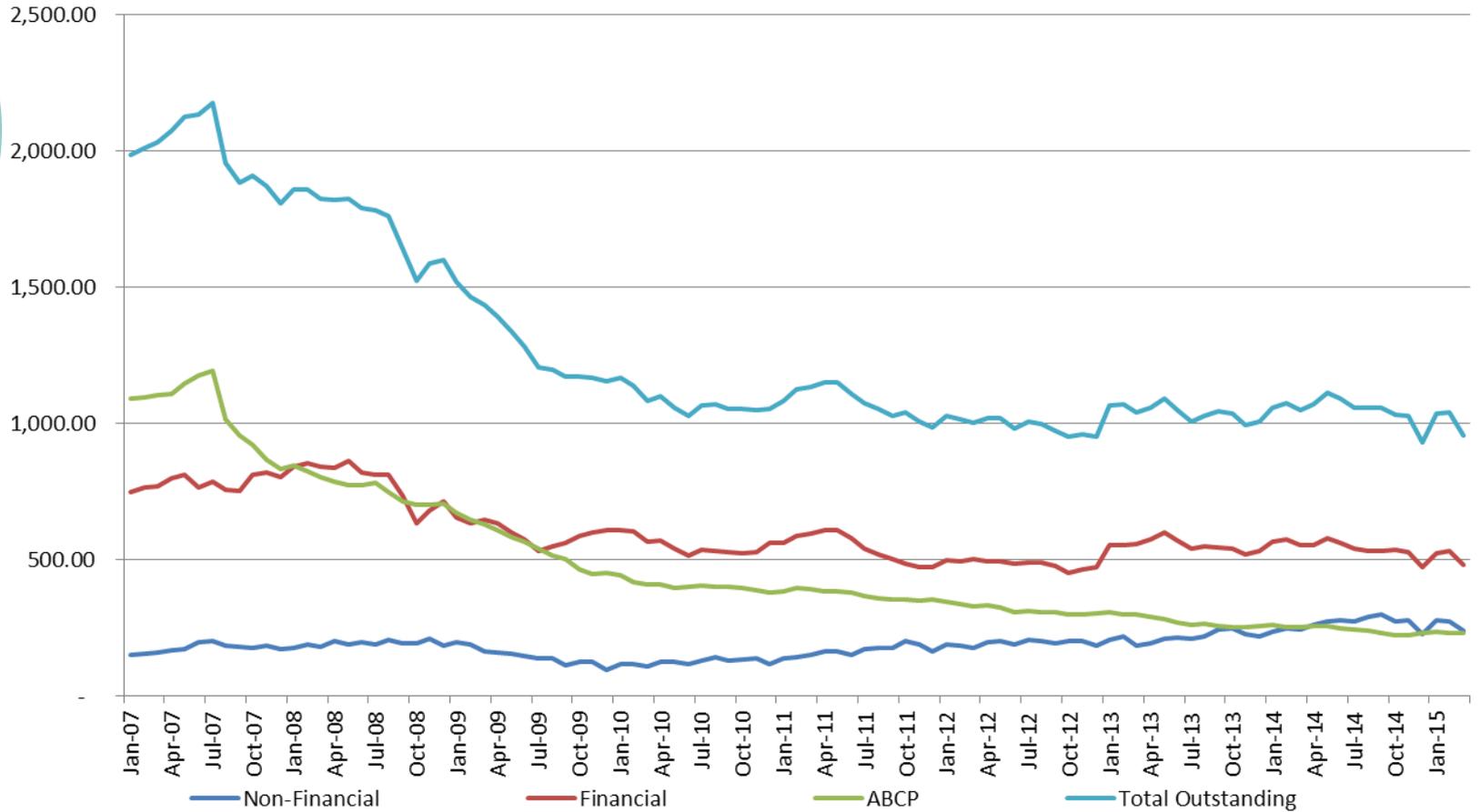
COMMERCIAL PAPER

Commercial Paper

- Historical background
 - Means of short-term funding
- Commercial Paper – a type of personal property
 - Article 3 Uniform Commercial Code

A written instrument or document such as a check, draft, promissory note, or a certificate of deposit, that manifests the pledge or duty of one individual to pay money to another.
- Generally a short-term unsecured promissory note
 - Does not create an ownership right
- Most issued in discount form with interest at maturity
 - Some CP may be purchase at par
- Typically held to maturity

Outstanding Commercial Paper



Source: SIFMA



Investment Authority

- California Gov. Code, Section 53601 (h):

Commercial paper of “prime” quality of the highest ranking or of the highest letter and number rating as provided for by a nationally recognized statistical rating organization (NRSRO). The entity that issues the commercial paper shall meet all of the following conditions in either paragraph (1) or (2):

Section 53601 (h) - Paragraph (1)

- Paragraph (1): The entity meets the following:
 - (A) – Is organized and operating in the United States as a general corporation
 - (B) – Has total assets of five hundred million dollars (\$500,000,000)
 - (C) – Has debt other than commercial paper, if any, that is rated “A” or higher by an NRSRO

Section 53601 (h) - Paragraph (2): Asset Backed Commercial Paper (ABCP)

- The entity meets the following:
 - (A) – is organized within the United States as a special purpose corporation, trust, or limited liability company
 - (B) – Has program wide credit enhancements including, but not limited to, overcollateralization, letters of credit, or a surety bond
 - (C) – Has commercial paper that is rated A-1 or higher, or the equivalent, by an NRSRO

Further Restrictions On All CP

- Eligible commercial paper shall have:
 - ...maximum maturity of 270 days or less
 - ... local agencies, other than counties or a city and county, may invest no more than 25 percent of their moneys in eligible commercial paper
 - Section 53635 - Counties (including City and County of San Francisco and the City of Los Angeles) may invest up to 40% of eligible funds in commercial paper
 - ... local agencies may purchase no more than 10 percent of the outstanding commercial paper of any single issuer

Nationally Recognized Statistical Rating Organization (NRSRO)

- What is an NRSRO ?
 - The Securities and Exchange Commission (SEC) has a listing of recognized credit rating services
- Some of the most familiar NRSRO:
 - Moody's Investor Service
 - Standard and Poor's Rating Services
 - Fitch, Inc
- Additional credit rating firms listed by SEC
 - A.M. Best Company
 - DBRS, Inc
 - Egan-Jones Ratings Co
 - Morningstar Credit Ratings, LLC

Ratings

- Moody's Investor Services – Prime scale
 - P-1 – Companies with a superior ability to repay short-term debts
 - P-2 – Companies with a strong ability to repay short-term debts
 - P-3 – Companies with an acceptable ability to repay short-term debts
 - Not Prime – Companies that do not meet the criteria for Prime issuers
- Standard & Poor's
 - A-1+
 - A-1
 - A-2
 - A-3

Registration Exemptions

- Securities Act of 1933 contains several provisions that exempt commercial paper from the registration requirements of the Securities and Exchange Commission
 - 3(a)3 - Commercial paper sold with maturities not exceeding nine months (270 days)
 - Proceeds are used to finance current transactions.
 - 4(a)(2) - Private placement exemption
 - These notes can only be sold to accredited institutional investors
- Many high grade 3(a)3 issuers are converting to 4(a)(2) programs

Commercial Paper Issuers

- Financial issuers
 - Wells Fargo, Bank of America, JP Morgan
 - BNP Paribas NY, Metropolitan Life, etc.
- Industrial issuers
 - Microsoft, Exxon Mobil, Johnson & Johnson, General Electric, Toyota, Abbott, Pfizer, IBM, Cargill, Disney, Coca-Cola, etc.
- Public issuers
 - University of California, other public agencies

Note: Examples only, not recommendations to purchase.

Asset-Backed Commercial Paper

- A type of CP where repayment is based on the cash flows of the underlying assets
- Special Purpose Entity (Conduit) – Created to house the assets and issue the commercial paper
- Enhancements
 - Liquidity facilities provided by third party financial institutions
 - Credit enhancement
 - Over collateralization
- Collapse of the ABCP market during the financial crisis

Asset-Backed Commercial Paper: Underlying Assets

- Trade receivables
- Consumer debt receivables
- Auto and equipment loans and leases
- Manufactured housing loans
- Dealer floor plan loans
- Collateralized debt obligations

Bloomberg Screen (DOCP)

<HELP> for explanation.
Click on column headings to sort by terms

Issuer Lists	Options		Output Results To		DIRECT ISSUER COMMERCIAL PAPER									
Issuer List-ALL ISSUERS	Yellow=Executable, Blue=Executable/Enabled for trading										S&P	MDY	FI	Outs.(MM)
Issuer	--1---	--2---	--3---	--4---	--5---	--6---	--7---	--15--	--30--	--45--				
1) AIG Funding Inc											A-2	P-2	NR	
2) Abbey Natl NA LLC											A-1	P-1	F1	5750
3) Credit Agric CIB NY	0.120						0.130*	0.090*	0.090*	0.090	A-1	P-1	F1	
4) Dexia Delaware LLC					0.150	0.150	0.220*	0.240*	0.310*	0.320	A-2	P-2	F2	176
5) Instit Sec Funding	0.160	0.160	0.160	0.160	0.160	0.160	0.180*	0.180	0.240	0.240	A-1	P-1	NR	2500
6) Intesa Funding LLC	0.200	0.230	0.230	0.230	0.230	0.230	0.250*	0.350*	0.450*	0.490*	A-3	P-2	F2	
7) Natixis NY	0.130	0.130	0.130	0.130	0.130	0.130	0.130*				A-1	P-1	F1	
8) Prudential Funding	0.070	0.070	0.070	0.070	0.080	0.080	0.080*				A-1+	P-1	F1	1400
9) Societe Generale								NQ	NQ		A-1	P-1	F1	
10) American Express Crd	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	A-2	P-1	F1	455
11) American Gen Fin Cor	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	NR	NP	NR	
12) American Gen Fin Inc	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	C	NR	NR	
13) BGL BNP Paribas SA	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	A-1	NR	NR	
14) BNP Paribas Finance	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	A-1	P-1	F1	
15) Commerzbank U.S Fin	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	A-2	P-2	F2	

Close This Window Abbey Natl NA LLC Rates for: 4-4 days

Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2015 Bloomberg Finance L.P.
SN 504853 PDT GMT-7:00 H190-1627-1 18-Jun-2015 10:12:20

Source: Bloomberg

Bloomberg "BOOM" Screen

<HELP> for explanation.
 95<Go> to Show Dealer List, <Menu> to Display Searches

Commercial Paper 91 Searches 92 Settings 97 Trading Access Money Market Offerings

93 Refine Search DEFAULT Prim & Sec Group by None 88 Sellback 89 Chart

AskSz (M)	Issuer	Maturity	SD	Dsc/Cpn	AskYld	S&P	M	F	Reg	Dlr	Pgm	DTM
100,000	CANCARA ASSET SE	10/16 - 10/21	1	0.300	0.300	A-1	P-1	F1	3c7A	MS	CP	120 - 125
100,000	CANCARA ASSET SE	12/15 - 12/21	1	0.400	0.401	A-1	P-1	F1	3c7A	MS	CP	180 - 186
1,000	CARGILL INC	06/24		0.080	0.080	A-1	P-1	F1	4.2A	CG	CP	6
31,000	CARGILL INC	06/25		0.090	0.090	A-1	P-1	F1	4.2A	JPM	CP	7
49,000	CATHOLIC HEALTH	08/04		0.170	0.170	A-1	P-1	F1+	3a4	JPM	CP	47
5,029	CATHOLIC HEALTH	08/26		0.190	0.190	A-1	P-1	F1+	3a4	JPM	CP	69
37,013	CATHOLIC HEALTH	09/17		0.220	0.220	A-1	P-1	F1+	3a4	JPM	CP	91
2,500	CHARTA LLC	12/01		0.390	0.391	A-1	P-1	F1	3c7A	CG	CP	166
4,000	CIESCO LLC	12/01		0.390	0.391	A-1	P-1	F1	3c7A	CG	CP	166
250	COCA-COLA CO	07/13		0.100	0.100	A-1+	P-1	F1	4.2A	BAML	CP	25
1,045	COCA-COLA CO	08/21		0.100	0.100	A-1+	P-1	F1	4.2A	MS	CP	64
12,800	COCA-COLA CO	10/13		0.220	0.220	A-1+	P-1	F1	4.2A	BAML	CP	117
7,100	COCA-COLA CO	10/27		0.230	0.230	A-1+	P-1	F1	4.2A	BAML	CP	131
5,500	COCA-COLA CO	10/28		0.230	0.230	A-1+	P-1	F1	4.2A	BAML	CP	132
3,100	COCA-COLA CO	10/30		0.230	0.230	A-1+	P-1	F1	4.2A	MS	CP	134
25,000	COCA-COLA CO	01/11 - 01/15	1	0.380	0.381	A-1+	P-1	F1	4.2A	MS	CP	207 - 211
25,000	COCA-COLA CO	01/26 - 01/29	1	0.400	0.401	A-1+	P-1	F1	4.2A	MS	CP	222 - 225
25,000	COCA-COLA CO	02/16 - 02/19	1	0.420	0.421	A-1+	P-1	F1	4.2A	MS	CP	243 - 246
25,000	COCA-COLA CO	03/14 - 03/18	1	0.470	0.472	A-1+	P-1	F1	4.2A	MS	CP	270 - 274
25,000	COCA-COLA CO	04/18 - 04/22	1	0.520	0.522	A-1+	P-1	F1	4.2A	MS	CP	305 - 309
25,000	COCA-COLA CO	05/16 - 05/20	1	0.570	0.573	A-1+	P-1	F1	4.2A	MS	CP	333 - 337
25,000	COCA-COLA CO	06/06 - 06/10	1	0.600	0.604	A-1+	P-1	F1	4.2A	MS	CP	354 - 358
9,750	COLGATE-PALM CO	06/29		0.090	0.090	A-1+	P-1	F1+	4.2A	CG	CP	11

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 SN 504853 PDT GMT-7:00 H190-1627-1 18-Jun-2015 10:29:46

Source: Bloomberg

BANKER'S ACCEPTANCES

Banker's Acceptances

- Created in the Federal Reserve Act of 1913
- Purpose is to facilitate domestic and international commercial transactions
- A bankers' acceptance is a time draft (bill of exchange) with a maturity of six months or less
- The bank on which the instrument is drawn stamps the word "accepted" across the face of the draft. In doing so, the bank accepts the responsibility to make payment upon maturity, whether or not the customer for which the acceptance was initiated has repaid the bank.
- This "acceptance" or bank liability makes the instrument a very marketable instrument.

Banker's Acceptance Creation



Exporter



Importer

Transaction to
import a product
or commodity



Banker's Acceptance Creation



Exporter



Letter of Credit



Importer



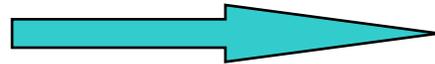
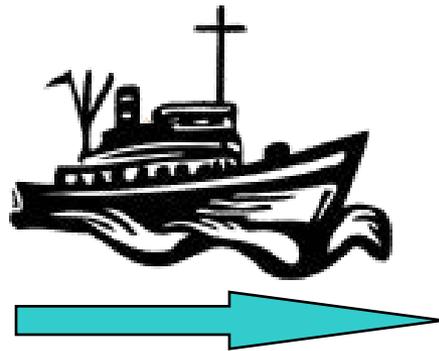
Banker's Acceptance Creation



Letter of Credit



Exporter



Importer



Banker's Acceptance Creation



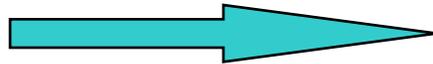
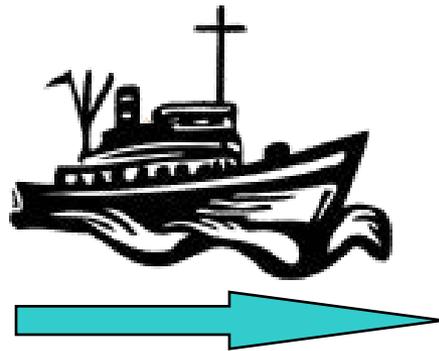
Letter of Credit



Time Draft



Exporter



Importer



Investment Authority

- California Gov. Code, Section 53601 (g):
 - ... Bankers' acceptances otherwise known as bills of exchange or time drafts that are drawn on and accepted by a commercial bank.

- Restrictions:
 - Purchases of Bankers' Acceptances shall not exceed 180 day's maturity,
 - Purchases of Bankers' Acceptances shall not exceed 40 percent of the agency's money...
 - ...no more that 30 percent of the agency's moneys may be invested in the banker's acceptance of any one commercial bank...

Definition

- Two types of bankers' acceptances:
 - Those eligible for discount or purchase by Federal Reserve banks
 - Those which are ineligible
 - Have the same characteristics of an eligible BA, but do not meet the strict criteria of an "eligible" BA.
 - These BA's do have the maintenance of a reserve requirement.

Definition

- BA's eligible for purchase by Federal Reserve (strict requirements):
 - Acceptance must finance a short-term (six months or less)
 - Self-liquidating commercial transaction of specific types
- Federal Reserve system member banks are not required to maintain reserves against eligible acceptances sold to investors
- Most banker's acceptances are backed by invoices, bills of lading or warehouse receipts creating an interest in the commodity itself

CALCULATIONS

Price and Yield Calculations

- Trade at a Discount to Par (Face) Value
- Accrete to Par Over the Life of the Security
- Interest Income
 - Difference Between Discounted Amount and Par
- Security Types
 - Treasury Bills
 - Agency Discount Notes
 - Commercial Paper
 - Bankers' Acceptances

Calculating the Discount, Price and Cost

Example: \$1 Million CP due in 182 days @ 1.00%

Calculating the Discount, Price and Cost

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$$\text{Price} = \$100 - \frac{\text{Days to maturity}}{360} \times \text{Discount Rate (\%)}$$

Calculating the Discount, Price and Cost

Example: \$1 Million CP due in 182 days @ 1.00%

$$\text{Price} = \$100 - \frac{\text{Days to maturity}}{360} \times \text{Discount Rate (\%)}$$

Discount Rate = 1.00

Days to Maturity = 182

Calculating the Discount, Price and Cost

Example: \$1 Million CP due in 182 days @ 1.00%

$$\text{Price} = \$100 - \frac{\text{Days to maturity}}{360} \times \text{Discount Rate (\%)}$$

Discount Rate = 1.00

Days to Maturity = 182

$$\text{Discount Amount} = \frac{182}{360} \times 1.00 = 0.505555$$

Calculating the Discount, Price and Cost

Example: \$1 Million CP due in 182 days @ 1.00%

$$\text{Price} = \$100 - \frac{\text{Days to maturity}}{360} \times \text{Discount Rate (\%)}$$

$$\text{Discount Rate} = 1.00$$

$$\text{Days to Maturity} = 182$$

$$\text{Discount Amount} = \frac{182}{360} \times 1.00 = 0.505555$$

$$\text{Price} = 100 - 0.50555 = 99.494444$$

Calculating the Discount, Price and Cost

Example: \$1 Million CP due in 182 days @ 1.00%

$$\text{Price} = \$100 - \frac{\text{Days to maturity}}{360} \times \text{Discount Rate (\%)}$$

$$\text{Discount Rate} = 1.00$$

$$\text{Days to Maturity} = 182$$

$$\text{Discount Amount} = \frac{182}{360} \times 1.00 = 0.505555$$

$$\text{Price} = 100 - 0.505555 = 99.494444$$

$$\text{Cost} = 1,000,000 \times .9949444 = \$994,944.44$$



Calculating Bond Equivalent Yield

$$\text{BEY} = \frac{\text{Discount}}{\text{Dollar Price}} \times \frac{365}{\text{Days to Maturity}} \times 100$$

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$$\text{BEY} = \frac{\text{Discount}}{\text{Dollar Price}} \times \frac{365}{\text{Days to Maturity}} \times 100$$

$$\text{BEY} = \frac{0.5055555}{99.494444} \times \frac{365}{182} \times 100$$

Calculating Bond Equivalent Yield

$$\text{BEY} = \frac{\text{Discount}}{\text{Dollar Price}} \times \frac{365}{\text{Days to Maturity}} \times 100$$

$$\text{BEY} = \frac{0.5055555}{99.494444} \times \frac{365}{182} \times 100$$

$$\text{BEY} = 1.0218$$

Bond Equivalent Yield: For Maturities Greater Than 182 Days

$$\sqrt{\left(\frac{\text{DTM}}{365}\right)^2 - 4\left(\frac{\text{DTM}}{2 \times 365} - 0.25\right)\left(\frac{\$ \text{ Price} - 100}{\$ \text{ Price}}\right)} - \frac{\text{DTM}}{365}$$

Yield =

$$2\left(\frac{\text{DTM}}{2 \times 365}\right) - 0.25$$

Allows the ability to compare the yield with securities that pay a regular coupon, in this instance a semi-annual coupon

Uses of Money Market Securities

- These are defined as “Money Market Securities”
- Use for short-term money management investments for cash flow needs of your agency
- Provides “Diversification” of investment securities for your cash management program, i.e. “Safety”
- Ensures appropriate “liquidity” for daily cash operations

Diversification Across Asset Classes

- Industry best practices recommend that you consider exposure to any one issuer across all asset types in the portfolio
- Most issuers have outstanding issues in multiple types of securities
 - Commercial Paper
 - Banker's Acceptances
 - Corporate bonds
 - Certificates of Deposit

Safekeeping

Industry best practices recommend the use of “Delivery versus Payment” (DVP) on the purchase of all investment securities

- Use of 3rd party custodian account
- Ensures the correct security (issuer, amount, maturity, rate of interest, etc.) is delivered to the custodian **before** payment is made
- Ensures securities are in name of local agency and satisfies GASB risk levels

Sources

- The following are some additional sources of information:
 - Stigum, Marcia, Fabozzi, Frank J, The Dow Jones-Irwin Guide to Bond and Money Market Investments, Dow Jones-Irwin, 1987
 - Stigum, Marcia, The Money Market: Myth, Reality, and Practice, Dow Jones-Irwin, 1978
 - Miller, Girard, Investing Public Funds, 2nd edition, GOFA, 1998
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- The following are some additional sources of information:
 - Kacperczyk, Marcin and Schnabl, Philipp, When Safe Proved Risky: Commercial Paper during the Financial Crisis of 2007-2009, Journal of Economic Perspectives, Vol 24, Number 1, Winter 2010, pp, 1987
 - Federal Reserve System, www.federalreserve.gov
 - Securities and Exchange Commission, www.sec.gov

Questions & Answers

Thank you!

Public Investment Webinar Series: The Public Investment Portfolio

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Webinar 4: Money Markets Part 2: CDs, Deposit Placement Services and Collateralized Bank Deposits	Postponed to September 9
Part 3: Repurchase Agreements, Reverse Repos and Securities Lending	August 5
Webinar 5: Corporates	August 19
Webinar 6: Asset-Backed Securities, Mortgage-Backed Securities and Collateralized Mortgage Obligations	Sept 2
Webinar 7: Mutual Funds, Money Market Mutual Funds and Local Government Pooled Investments	Sept 16

For more information or to register, go to
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Tony Garcia, CFA

Vice President

Fixed Income Sales

Wells Fargo Securities, LLC

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